In the claims

1. (currently amended) A system comprising:

an interconnect to carry direct current (DC);

an electronic device connectable to the interconnect to receive DC and having a communication circuit to transmit signals over the interconnect; and,

a power supply connectable to the interconnect to provide the DC to the electronic device and having a decoder circuit to decode the signals received over the interconnect from the electronic device, where the decoder circuit is part of the power supply.

2. (original) The system of claim 1, wherein the power supply further has a communication circuit to transmit additional communication signals over the interconnect, and the electronic device further has a decoder circuit to decode the additional communication signals received over the interconnect from the power supply.

3. (original) The system of claim 1, wherein the communication signals are one of high-frequency pulse-width modulation (PWM) signals and high-frequency square-wave signals.

4. (original) The system of claim 1, wherein the communication signals are high-frequency sinusoidal signals.

5. (original) The system of claim 1, wherein the communication signals are high-frequency triangular signals.

6. (original) The system of claim 1, wherein the electronic device comprises at least one isolating component to substantially isolate the communication signals from components of the electronic device other than the communication circuit.

7. (original) The system of claim 1, wherein the electronic device is an image-forming device.

8. (original) The system of claim 1, wherein the power supply comprises at least one isolating component to substantially isolate the communication signals from components of the power supply other than the decoder circuit.

9. (original) The system of claim 1, wherein the power supply and the interconnect are internal to the electronic device.

10. (original) The system of claim 1, wherein the power supply and the interconnect are external to the electronic device.

11. (original) A system comprising:

a direct current (DC) interconnect;

an electronic device having a principal functionality and connectable to the interconnect to receive DC and comprising:

one or more components to provide the principal functionality of the electronic device;

a pulse-width modulation (PWM) communication circuit to transmit high-frequency PWM signals over the interconnect;

an inductive isolating component to substantially isolate the high-frequency PWM signals from the one or more components of the electronic device; and,

a power supply connectable to the interconnect to convert alternating current (AC) from a power source to DC for the electronic device and comprising:

one or more components to convert the AC to the DC according to one or more parameters;

a decoder circuit to decode the high-frequency PWM signals received over the interconnect from the electronic device into the one or more parameters;

an inductive isolating component to substantially isolate the high-frequency PWM signals from the one or more components of the power supply.

12. (original) The system of claim 11, wherein the power supply further comprises a PWM communication circuit to transmit additional high-frequency PWM signals over the interconnect, and the electronic device further comprises a decoder circuit to decode the additional high-frequency PWM signals received over the interconnect from the power supply.

13. (original) The system of claim 11, wherein the inductive isolating component of the electronic device and the inductive isolating component of the power supply each comprises an inductor.

14. (original) The system of claim 11, wherein the electronic device is an image-forming device.

15.-23. (cancelled)

24. (original) A power supply comprising:

a decoder circuit to decode high-frequency communication signals received an interconnect into one or more parameters;

one or more components to convert alternating current (AC) from a power source to direct current (DC) for transmission over the interconnect according to the one or more parameters; and,

a high-frequency filter operatively coupled between the decoder circuit and the one or more components to attenuate transmission of high-frequency communication signals to the one or more components.

25. (original) The power supply of claim 24, further comprising a high-frequency communication circuit to transmit additional high-frequency communication signals over the interconnect.

26. (original) The power supply of claim 24, further comprising the interconnect.

27. (original) The power supply of claim 24, wherein the high-frequency filter comprises an inductor.

28. (original) The power supply of claim 24, wherein the high-frequency communication signals comprise one of: pulse-width modulation (PWM) signals, square-wave signals, sinusoidal signals, and triangle-wave signals.

29. (original) A method comprising:

encoding one or more parameters into signals by a device;

transmitting the signals over a conductor of an interconnect carrying direct current (DC) for the device;

receiving the signals over the conductor by a power supply for the device;

decoding the one or more parameters from the signals by the power supply; and,

converting alternating current (AC) to DC according to the one or more parameters.

30. (original) The method of claim 29, wherein encoding the one or more parameters into the signals comprises encoding the one or more parameters into a series of high-frequency pulses.

31. (original) The method of claim 30, further comprising:

encoding information into an additional series of high-frequency pulses by the power supply;

transmitting the additional series of high-frequency pulses over the conductor of the interconnect by the power supply;

receiving the additional series of high-frequency pulses over the conductor of the interconnect by the device; and,

decoding the information from the additional series of high-frequency pulses by the device.

32. (original) The method of claim 30, further comprising isolating the series of high-frequency pulses within the device.

33. (original) The method of claim 30, further comprising isolating the series of high-frequency pulses within the power supply.

34. (original) The method of claim 30, wherein encoding the one or more power parameters into the series of high-frequency pulses comprises pulse-width modulating the one or more power parameters.